

4. (Amended) A combustion method according to claim 1,
wherein said fuel is injected from at least two separate
injection openings, caused to collide with an air jet flow having
an increased specific surface area in a wide area, and rapidly
mixed with said air jet flow with strong turbulences.

5. (Amended) A combustion method according to claim 1,
wherein a plurality of said fuel jet flows are formed, and said
fuel jet flows collide with each other before coming in contact
with said air jet flow.

6. (Amended) A combustion method according to claim 1,
wherein a plurality of said air jet flows are formed, and said
air jet flows collide with each other before coming in contact
with said fuel jet flow.

7. (Amended) A combustion method according to claim 1,
wherein a plurality of said fuel jet flows and said air jet flows
are formed, and said air jet flows collide with each other and
said fuel jet flows collide with each other before said fuel jet
flows collide with said air jet flows.

8. (Amended) A combustion method according to claim 1,
wherein a plurality of pairs of said fuel jet flows and said air

jet flows which collide with each other in said furnace are formed in order to form a large combustion field.

9. (Amended) A combustion method according to claim 1, wherein said combustion air whose quantity is less than a theoretical air quantity is supplied and high-temperature air combustion for forming a non-oxidizing atmosphere or a reduction atmosphere is carried out.

10. (Amended) A combustion method according to claim 1, wherein said combustion air whose quantity is not less than the theoretical air quantity is supplied and high-temperature air combustion by turbulent diffusion mixing is provoked.

15. (Amended) A burner according to claim 13, wherein a plurality of said small holes form a jet flow in which said air jet flows collide with each other before coming in contact with said fuel jet flow.

16. (Amended) A burner according to claim 11, wherein said fuel nozzle has at least two injection openings and causes said fuel to collide with said air jet flow having an increased specific surface area in a wide area.

17. (Amended) A burner according to claim 11, wherein said fuel nozzle has at least two injection openings and forms a jet flow in which fuel jet flows injected from said respective injection openings collide with each other before coming in contact with said air jet flow.

18. (Amended) A burner according to claim 11, wherein a plurality of said fuel nozzles are arranged so as to surround said air jet flow.

20. (Amended) A burner according to claim 11, wherein a plurality of said air jet flows and a plurality of said fuel jet flows are formed, and said air jet flows collide with each other and said fuel jet flows collide with each other before said air jet flows collide with said fuel jet flows.

21. (Amended) A burner according to claim 11, wherein said air throat includes a regenerative medium and flow switching means for alternately leading combustion exhaust gas and combustion air to said regenerative medium, and injects into said furnace said combustion air preheated to have a high temperature close to a combustion exhaust gas temperature through said regenerative medium.

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23. (Amended) A burner according to claim 21, wherein said regenerative medium is included in said air throat, and said flow switching means is directly connected to a burner body constituting said air throat and switches said combustion air and said exhaust gas at a short distance from said regenerative medium.

24. (Amended) A burner according to claim 11, wherein said combustion air supplied from said air throat has a quantity which is less than a theoretical air quantity, and high-temperature air combustion for forming a non-oxidizing atmosphere or a reduction atmosphere is carried out.

25. (Amended) A burner according to claim 11, wherein said combustion air supplied from said air throat has a quantity which is not less than the theoretical air quantity and high-temperature air combustion by turbulent diffusion mixing is provoked.

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28. (Amended) A burner according to claim 11, a plurality of pairs of said air throats and said fuel nozzles are set to constitute a large combustion machine. -